

THE MICROSCOPIC STRUCTURE OF THE SPLEEN
OF THE DOMESTIC
MAMMALS.

by
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PHOTOGRAPHIC ILLUSTRATIONS.



30150

001093480

PHOTOGRAPHS OF RECONSTRUCTION MODELS.

The magnification figure quoted with each legend indicates approximately the ratio between the size of the structures as illustrated and their actual size.

Fig. 1.

HORSE. M.x 35. The model represents; numerous trabeculae (T) some arising from the capsule and most of them uniting with the hilar sheath (H.S.) which invests artery (A) nerve (N) and lymphatic (L); six Malpighian bodies (M.B.) grouped around two pulp arteries (P.A.) and their branches: small venules (v) associated with three of the corpuscles, and several larger veins (V) opening into a venous trunk (V.T.).

Fig. 2.

OX. M.x 35. In this model the thin and interrupted nature of the hilar sheath (H.S.) is manifest, also the larger size of the Malpighian bodies (M.B.) and the different relation of the artery (A) to the trabeculae (T) and the Malpighian bodies (M.B.). A portion of the lymphoid sheath (L.S.) is also present.

Fig. 3.

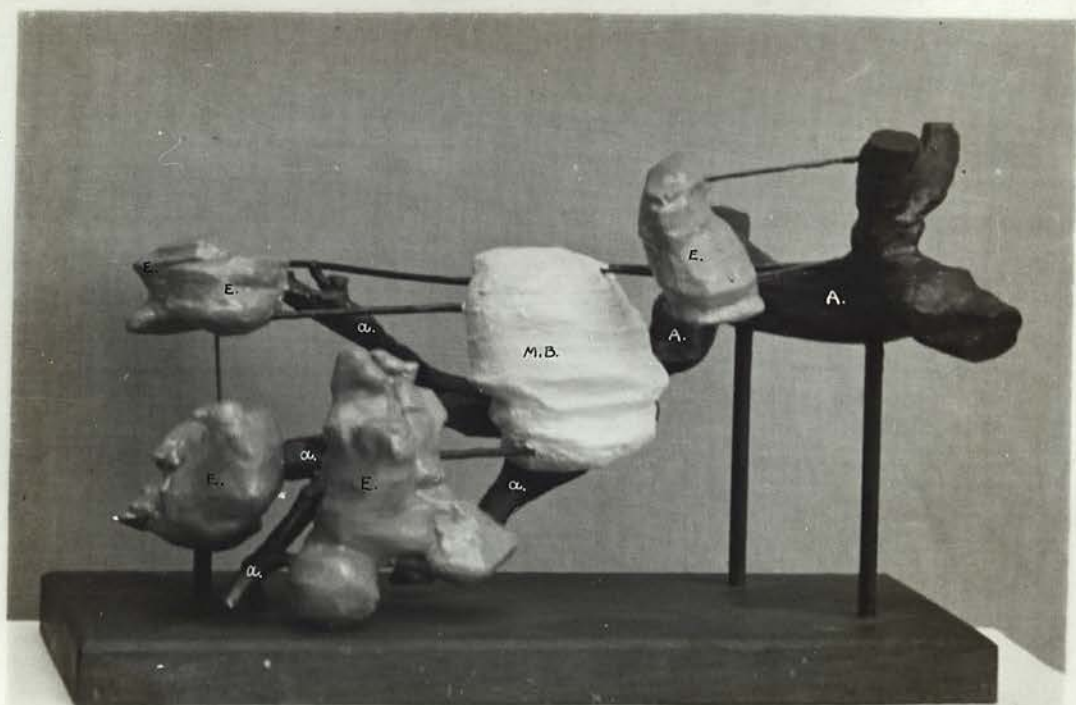
SHEEP. M.x 38. A pulp artery (P.A.) and numerous associated Malpighian bodies (M.B.) are represented also a small part of a larger artery and its hilar sheath (H.S.).

Fig. 4.

FIG. M.x 133. An artery (A) its branches (a) a Malpighian body (M.B.) and four ellipsoids (E) are portrayed.



3.



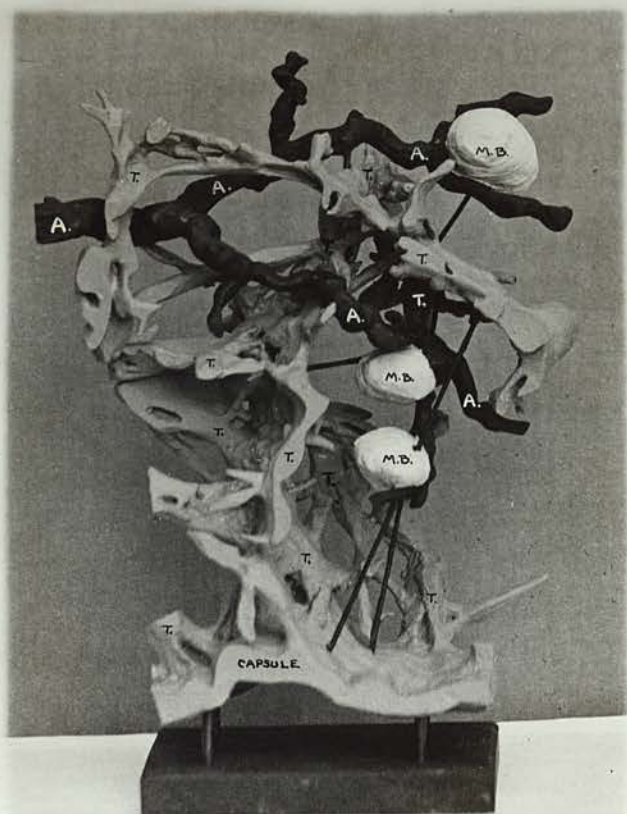
4.

Fig. 5.

DOG. M.x 44. Even in a model such as this, which represents only a very small portion of the organ, the extreme complexity of the trabeculae (T) is very obvious. An artery (A) is present, and its branches in their distribution are related to three Malpighian bodies (M.B.). A slight spiraling of the vessel can be distinguished.

Fig. 6.

CAT. M.x 64 An artery (A) two Malpighian bodies (M.B.), numerous trabeculae (T) and a small part of the capsule are illustrated.



5.



6.

Fig. 7.

OX. M.x 84. The photograph shows a single Malpighian body (M.B.) with a small artery (A.) and its twigs associated.

Fig. 8.

OX. M.x 69. This photograph is of the same model as No. 7. It is intended to show the artery (A.) curving round the Malpighian body (M.B.) and the smaller branches (a.) diverging into the pulp.



7.



8.

Fig. 9.

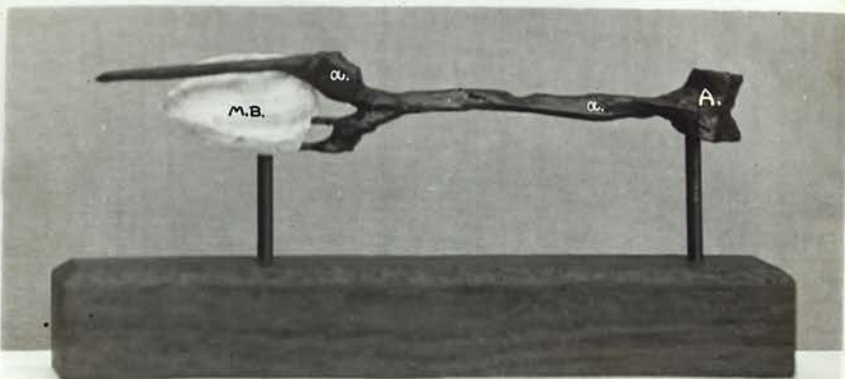
SHEEP. M.x 85. An artery (A) is intimately associated with two Malpighian bodies (M.B.). The vessel terminates as a penicillum in which there are five small branches (a) (Only three can be distinguished in the photograph.).

Fig. 10.

HORSE. M.x 87. A single corpuscle (M.B.) and a small vessel (a) arising from a larger artery (A) are portrayed.



9.



10.

Fig. 11.

DOG. M.x 148. The model of a single
Malpighian body (M.B.)





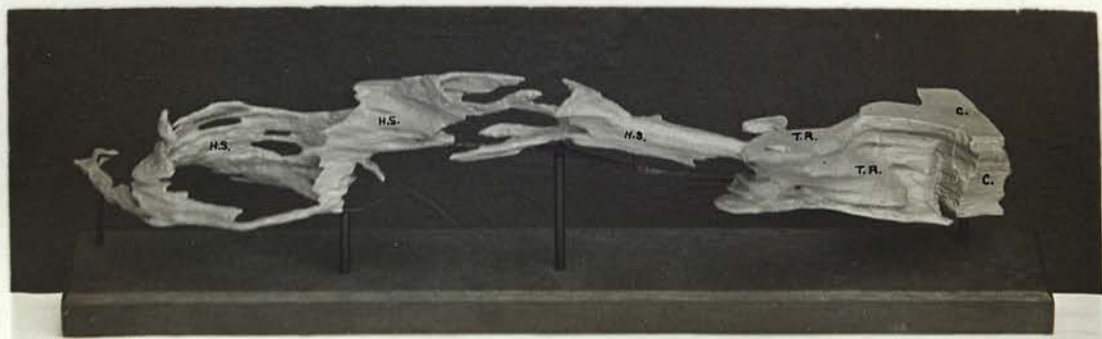
Fig. 12.

FIG. M.x 33. This model represents part of a
hilar sheath (H.S.). The two interrupted and
distended portions indicate the position of
Malpighian bodies. The sheath is attached to
a trabecular ridge (T.R.) which arises from the
capsule (C.).





11.



12.

Fig. 13.

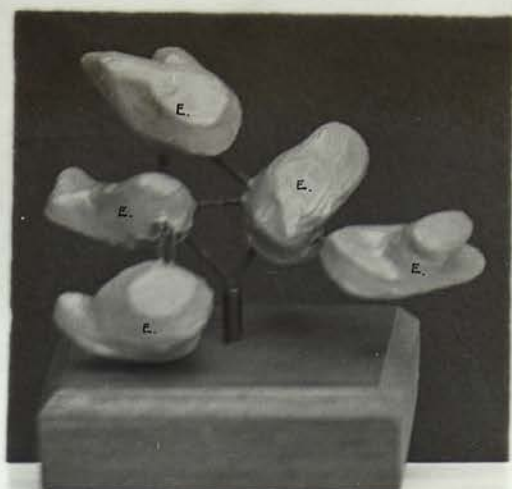
FIG. M. x 100. Illustrates a group of five ellipsoids (E).

Fig. 14.

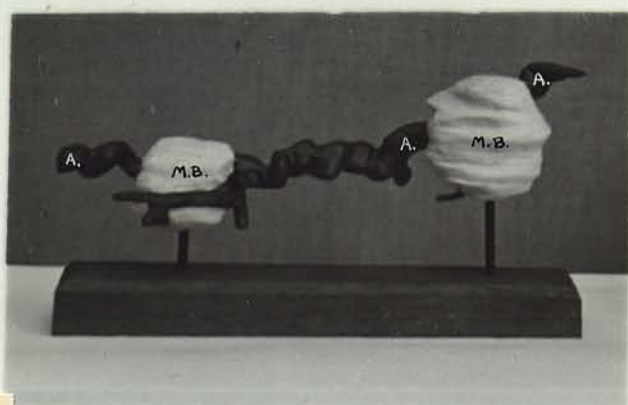
FIG. M. x 51. The two Malpighian bodies (M.B.) and the accompanying artery (A) which are enclosed by the hilar sheath (H.S.) represented in No. 12, are illustrated in this photograph. The spiral course of the vessel is quite distinct.

Fig. 15.

CAT. M. x 139. The model illustrates the intimate union between trabeculae (T) and the small arteries (a).



13.



14.



15.

PHOTOMICROGRAPHS.

CAPSULE.

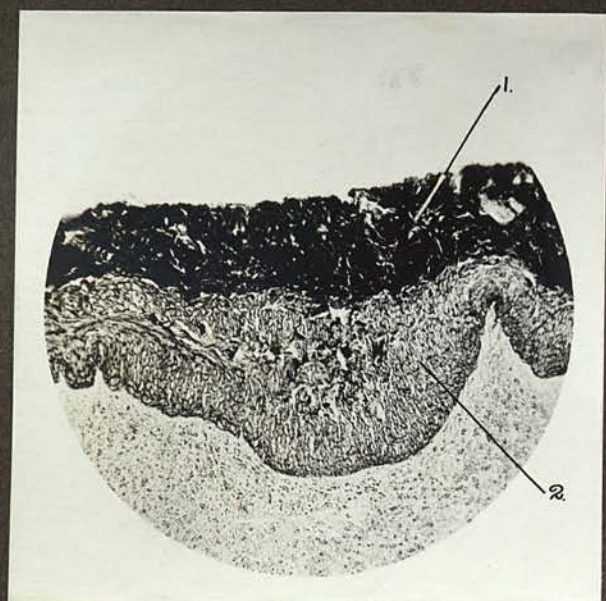
Fig. 16. Horse. 7 years old. Fixative Susa.
Stain Mallory. M. x 74.

Fig. 17. Ox. 6 years old. Fixative Susa. Stain
Mallory. M. x 71.

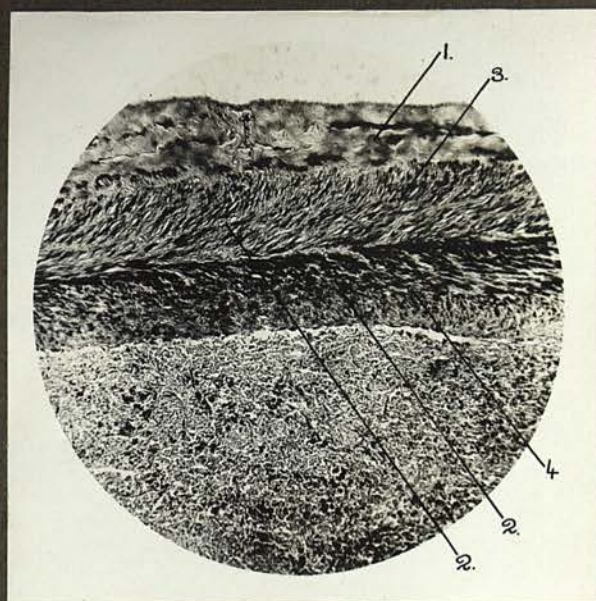
Fig. 18. Sheep. 3 years old. Fixative Susa.
Stain Mallory. M. x 75.

Fig. 19. Pig. 1 year old. Fixative Susa.
Stain Mallory. M. x 71.

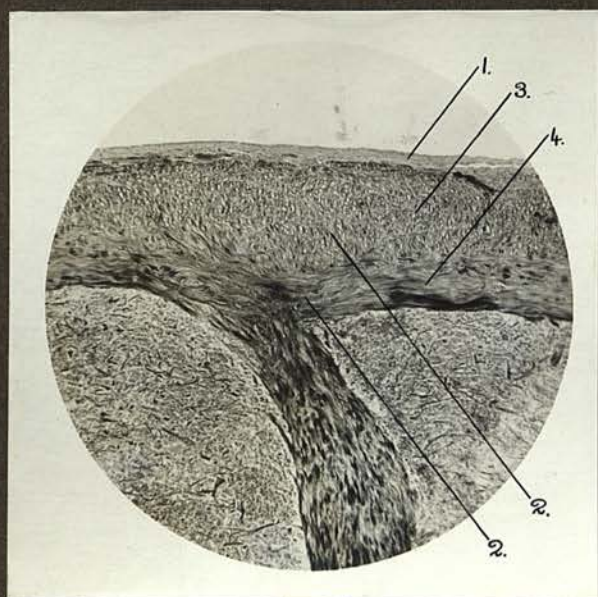
1. Serous coat.
2. Muscular coat.
3. Superficial stratum.
4. Deep stratum.



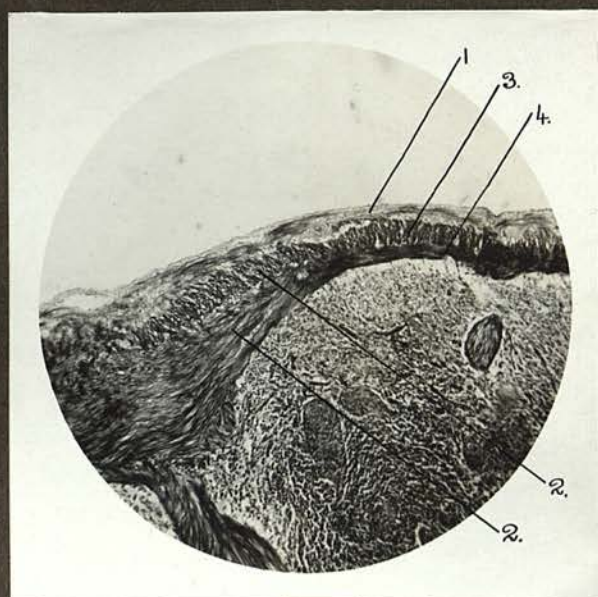
16.



17.



18.



19.

CAPSULE.

Fig. 20. Dog. 12 years old. Fixative Susa.
Stain Mallory. M. x 73.

Fig. 21. Cat. 2 years old. Fixative Susa.
Stain Mallory. M. x 72.

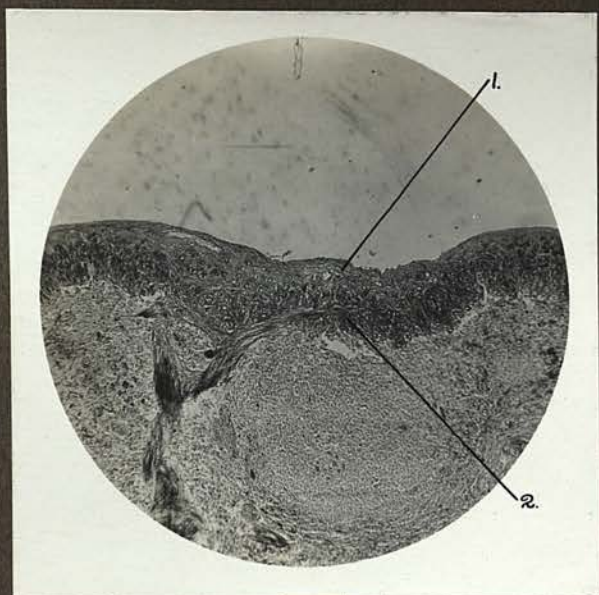
1. Serous coat.
2. Muscular coat.

HILAR SHEATH.

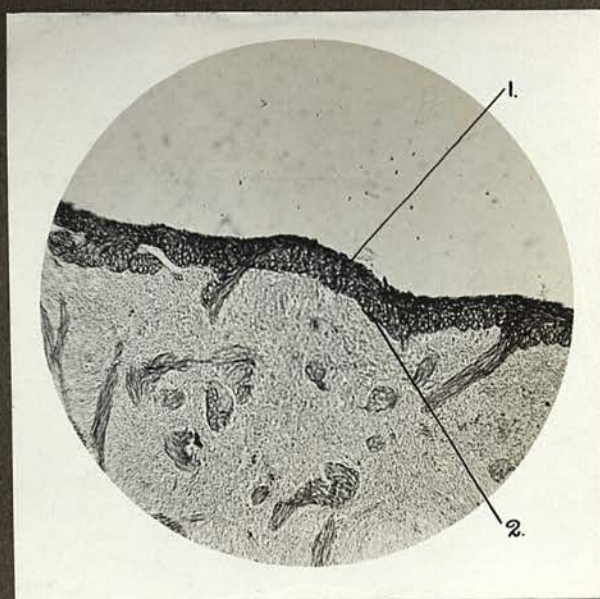
Fig. 22. Horse. 20 years old. Fixative Susa.
Stain Mallory. M. x 42.

Fig. 23. Horse. 9 years old. Fixative Susa.
Stain Mallory. M. x 62.

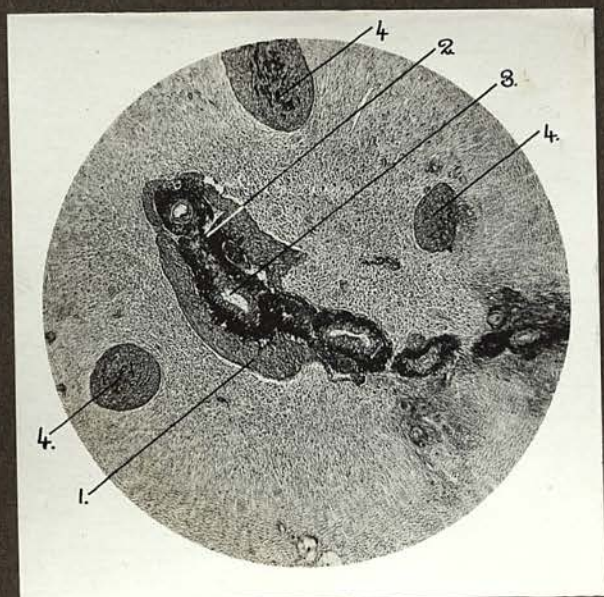
1. Muscular coat.
2. Adventitious coat.
3. Artery.
4. Trabecula.
5. Nerve.



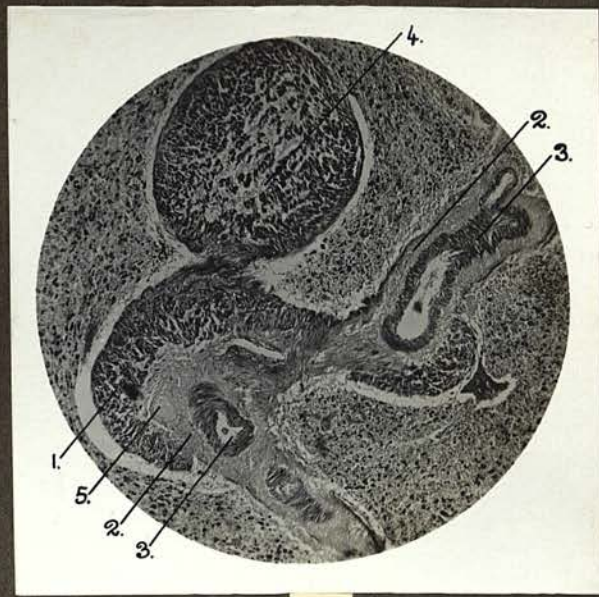
20.



21.



22.



23.

HILAR SHEATH.

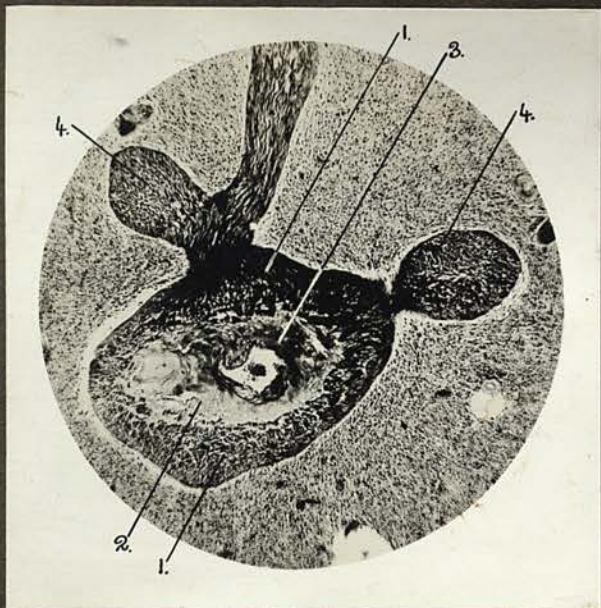
Fig. 24. Horse. Fixative Susa. Stain
Mallory. M. x 29.

Fig. 25. Ox 2 years 3 months. Fixative Susa.
Stain Mallory. M. x 23.

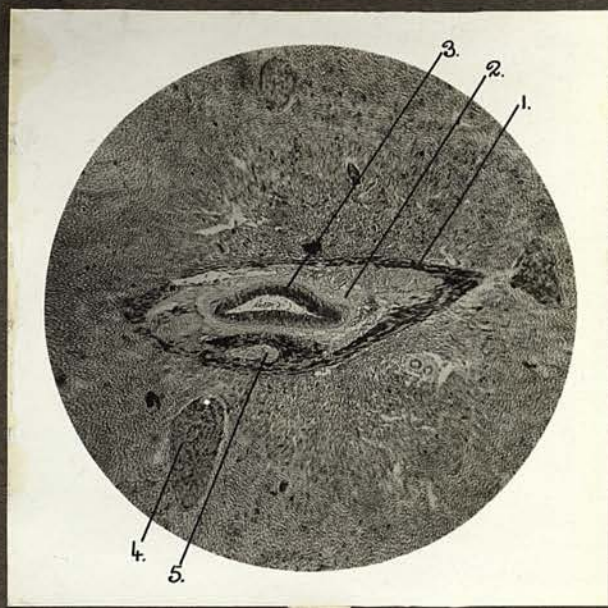
Fig. 26. Ox 2 years 3 months. Fixative Susa.
Stain Mallory. M. x 90.

Fig. 27. Sheep 6 months old. Fixative Susa.
Stain Mallory. M. x 34.

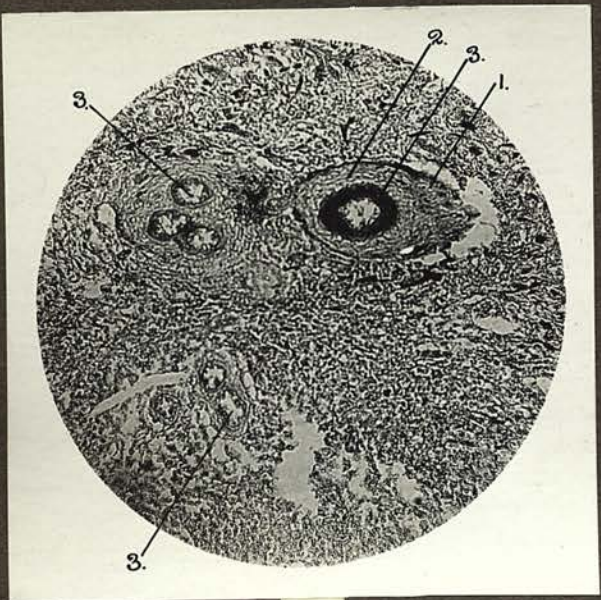
1. Muscular coat.
2. Adventitious coat.
3. Artery.
4. Trabecula.
5. Nerve.



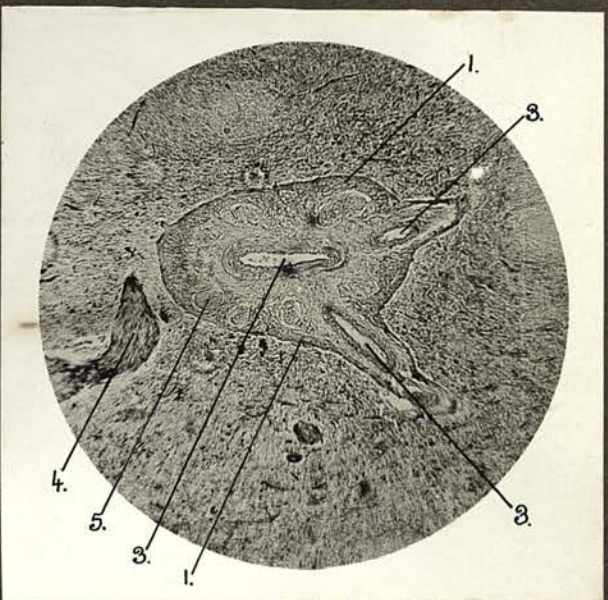
24.



25.



26.



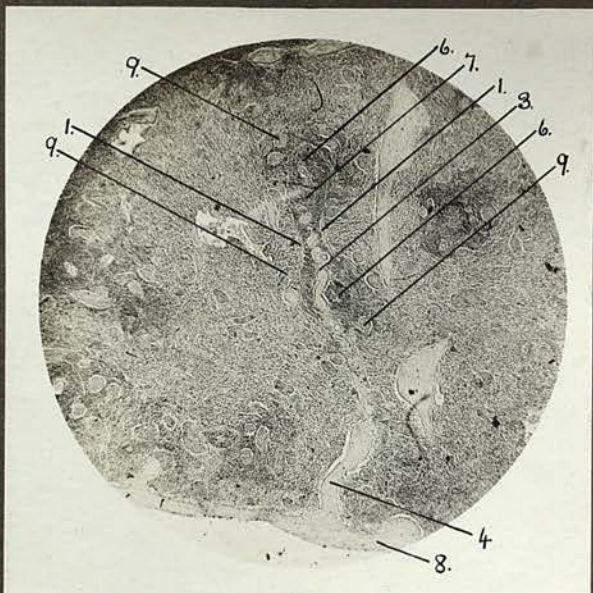
27.

HILAR SHEATH.

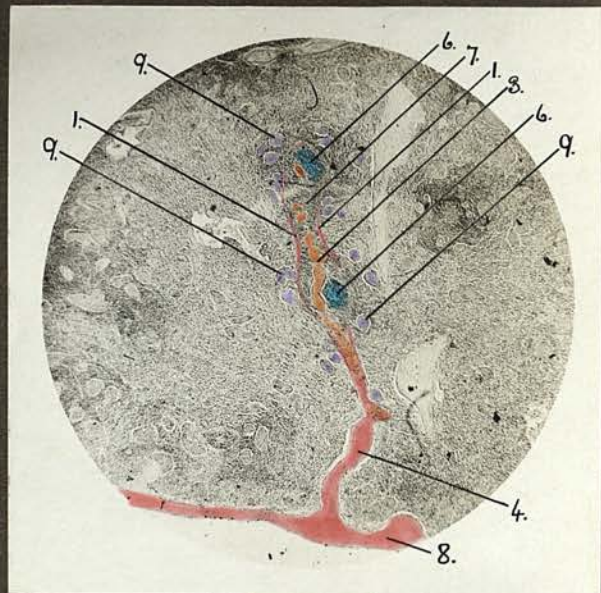
Fig. 28. Pig. Fixative Susa. Stain
haematoxylin and eosin. M. x 20.
A. Uncoloured. B. Coloured.

Fig. 29. Pig. Fixative Susa. Stain
Haematoxylin and eosin. M. x 18.
A. Uncoloured. B. Coloured.

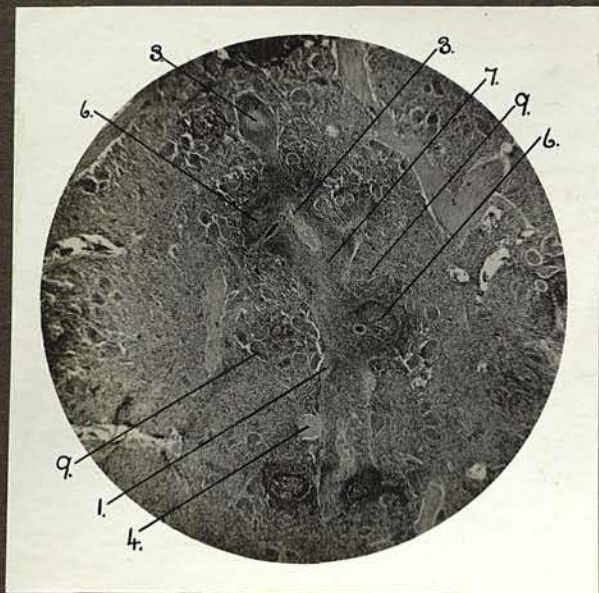
1. Muscular coat.
- ~~2. Adventitious coat.~~
3. Artery.
4. Trabecula.
- ~~5. Nerve~~
6. Malpighian body.
7. Lymphoid sheath.
8. Capsule.
9. Ellipsoid.



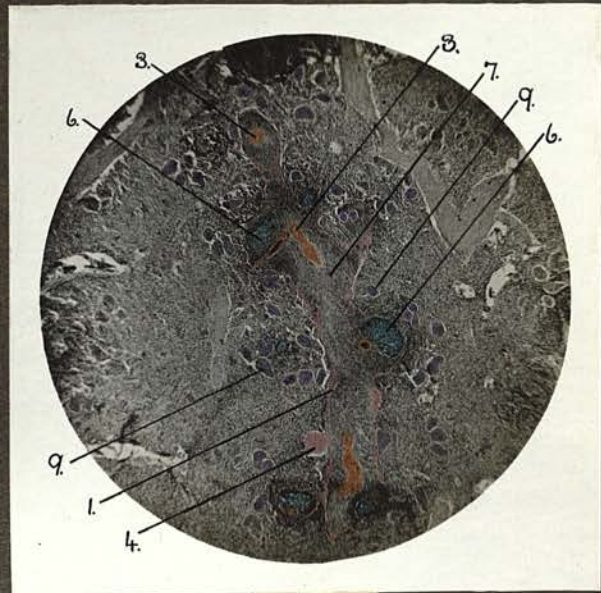
28. A.



28. B.



29. A.



29. B.

LYMPHOID SHEATH.

Fig. 32. Pig. Fixative Susa. Stain Mallory.
M. x 59. A. Uncoloured B. Coloured.

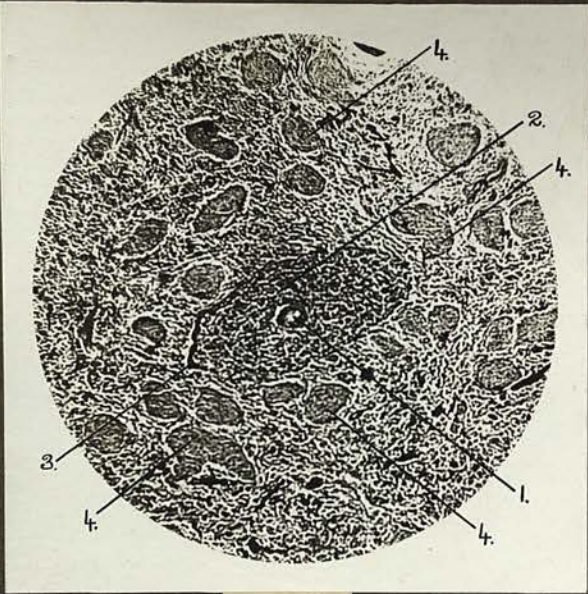
1. Artery.
2. Lymphoid sheath .
3. Muscular coat of hilar sheath.
4. Ellipsoid.

CAPSULE OF MALPIGHIAN BODIES.

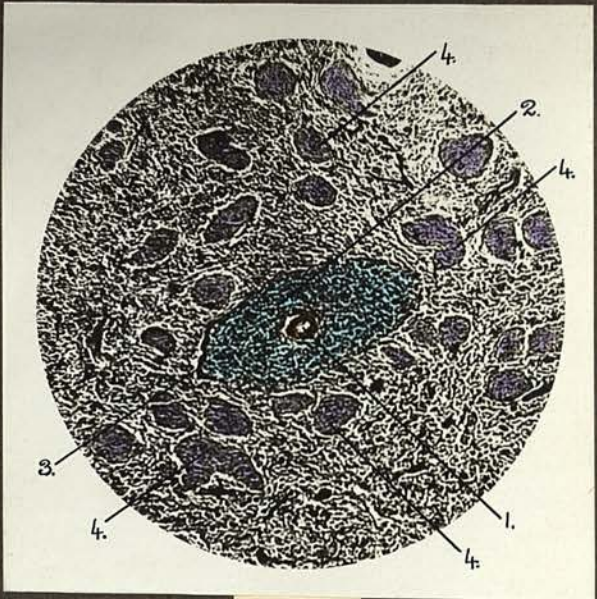
Fig. 33. Foal new born. Fixative Susa.
Stain phospho-tungstic acid
haematoxylin. M. x 17.

Fig. 34. Foal new born. Fixative Susa.
Stain Mallory. M. x 82.

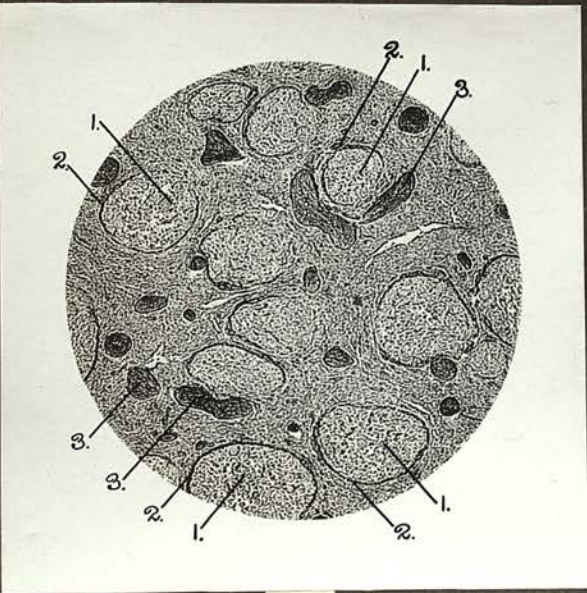
1. Malpighian body .
2. Capsule of Malpighian body .
3. Trabecula.



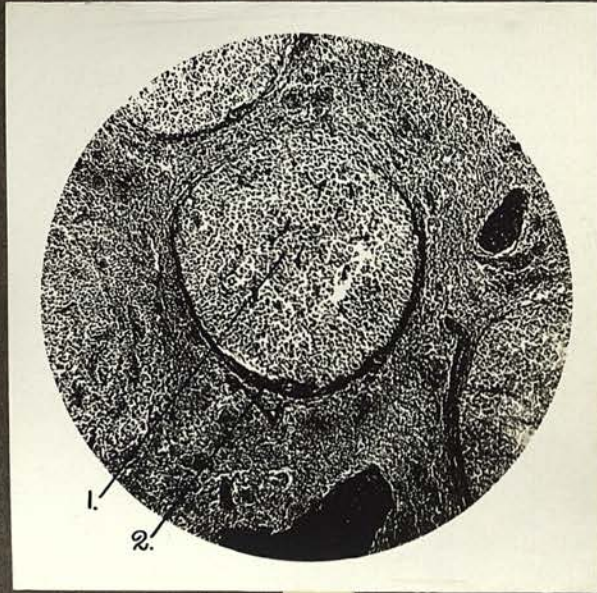
32. A.



32. B.



33.



34.

CAPSULE OF MALPIGHIAN BODIES.

Fig. 35. Foal. new born. Fixative Susa.

Stain Mallory. M. x 235.

Fig. 36. Ox. 1 year 9 months old. Fixative

Susa. Stain phospho-tungstic
acid haematoxylin. M. x 110.

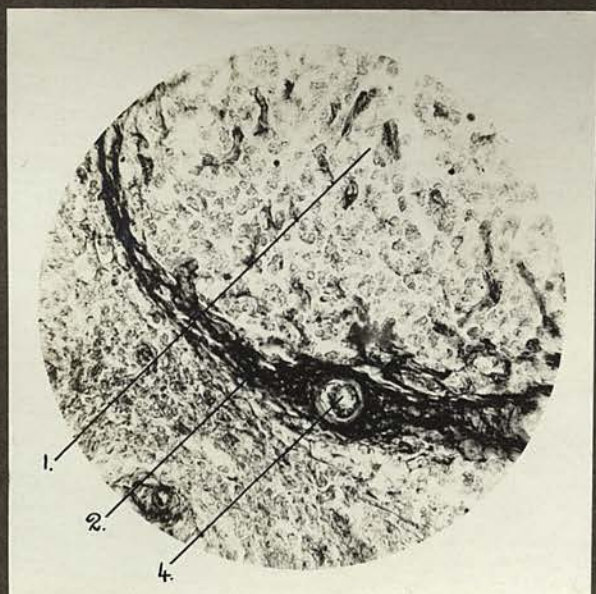
Fig. 37. Ox. 2 years 9 months old. Fixative

Susa. Stain phospho-tungstic
acid haematoxylin. M. x 74.

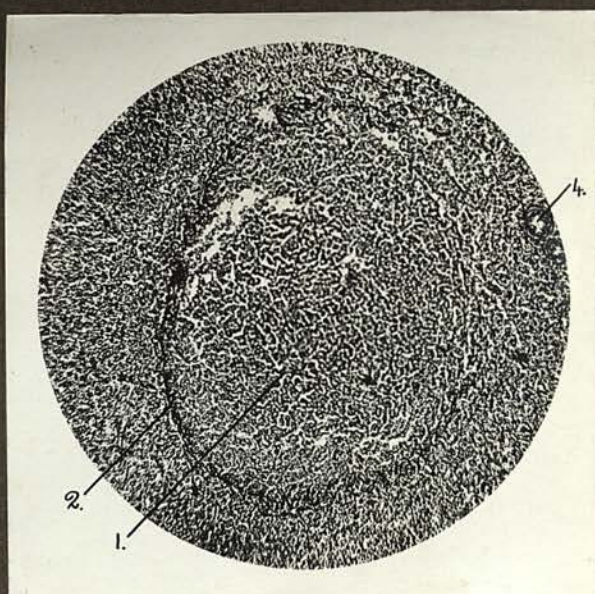
Fig. 38. Sheep. 1 year old. Fixative Susa.

Stain Mallory. M. x 58.

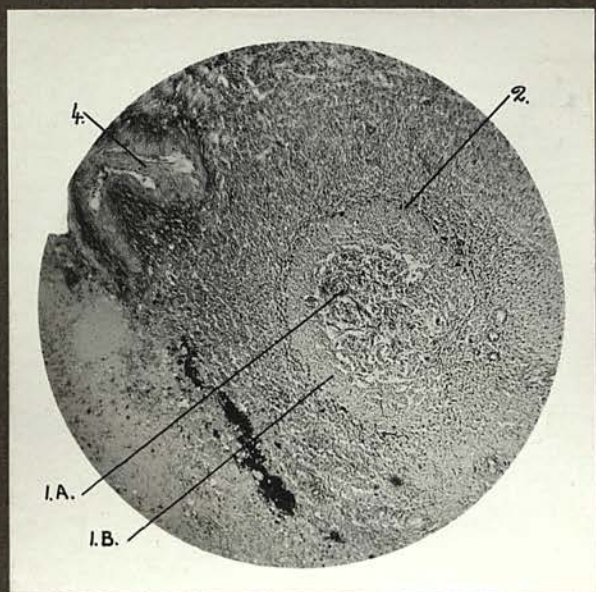
1. Malpighian body.
 - 1A. Germ centre.
 - 1B. Peripheral zone.
2. Capsule of Malpighian body.
3. Trabecula.
4. Artery.



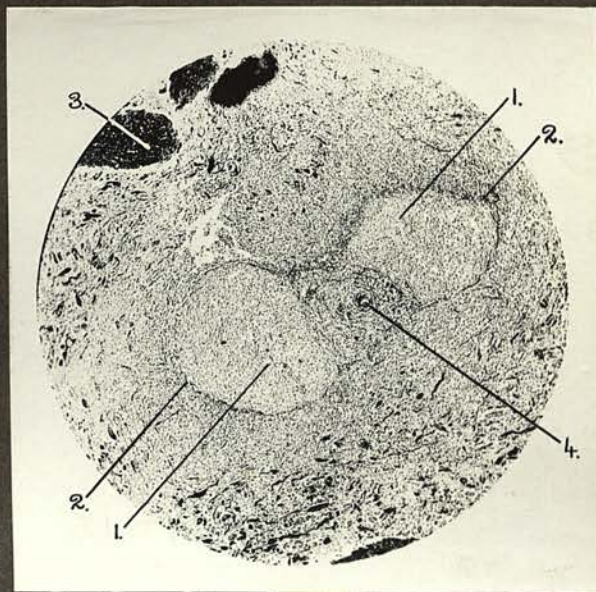
35.



36.



37.

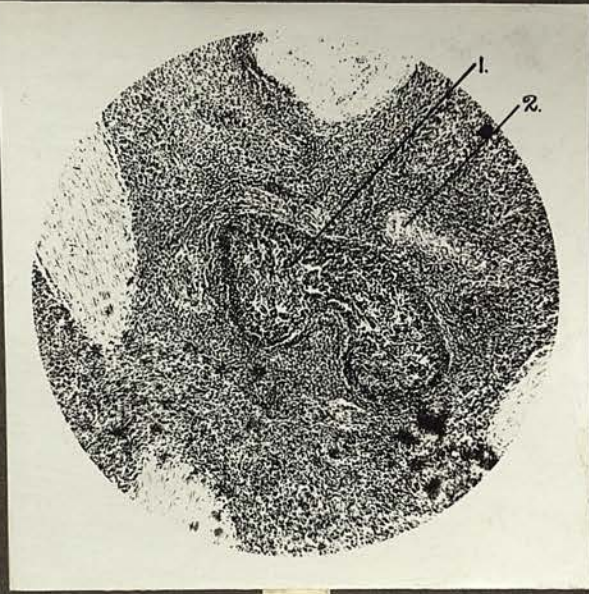


38.

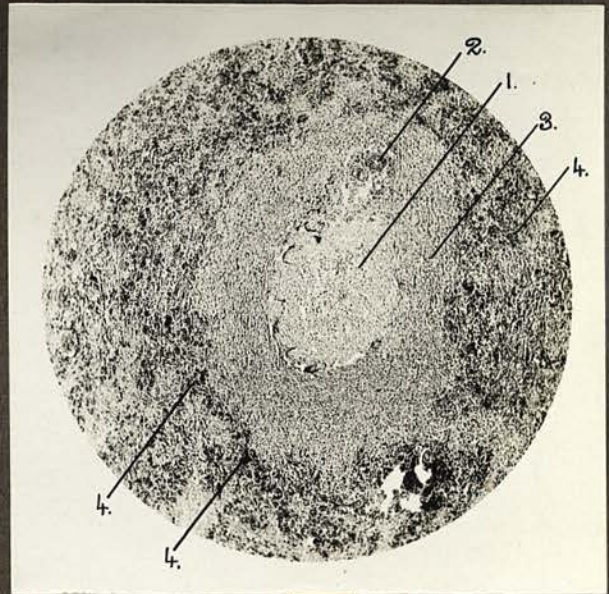
MALPIGHIAN BODIES.

- Fig. 39. Horse. Fixative Susa. Stain
haematoxylin and eosin. M. x 74.
- Fig. 40. Cow. 7 years old. Fixative Susa.
Stain Mallory. M. x 62.
- Fig. 41. Sheep. 4 years 3 months old. Fixative
Susa. Stain Mallory. M. x 52.
- Fig. 42. Pig. 1 year old. Fixative Susa.
Stain Mallory. M. x 32.

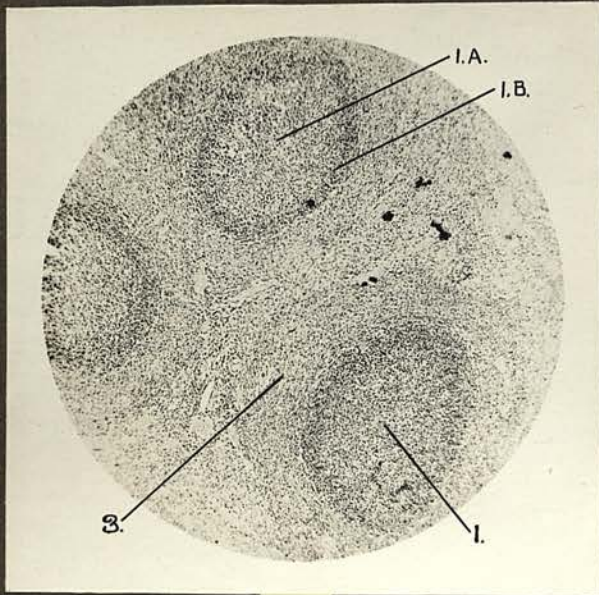
1. Malpighian body.
 - 1A. Germ centre.
 - 1B. Peripheral zone.
2. Artery.
3. Lymphoid sheath.
4. Pigment granules.
5. Ellipsoids.



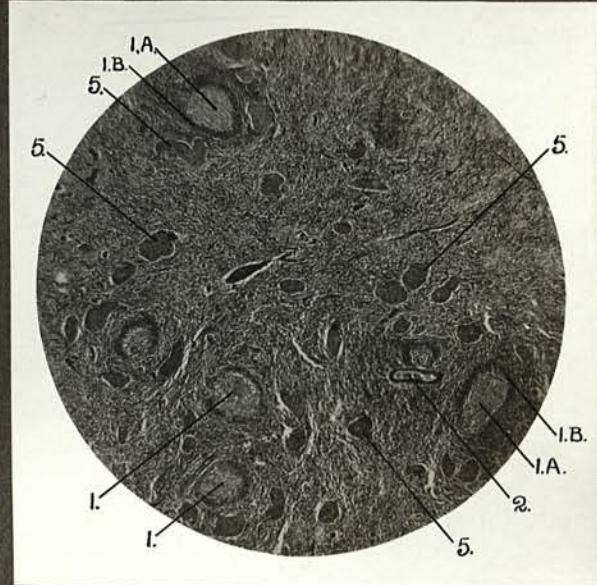
39.



40.



41.



42.

MALPIGHIAN BODIES.

Fig. 43. Dog. 2 years old. Fixative Susa.
Stain phospho-tungstic acid
haematoxylin. M. x 60.

Fig. 44. Kitten. 6 months old. Fixative
Susa. Stain haematoxylin and
eosin. M. x 63.

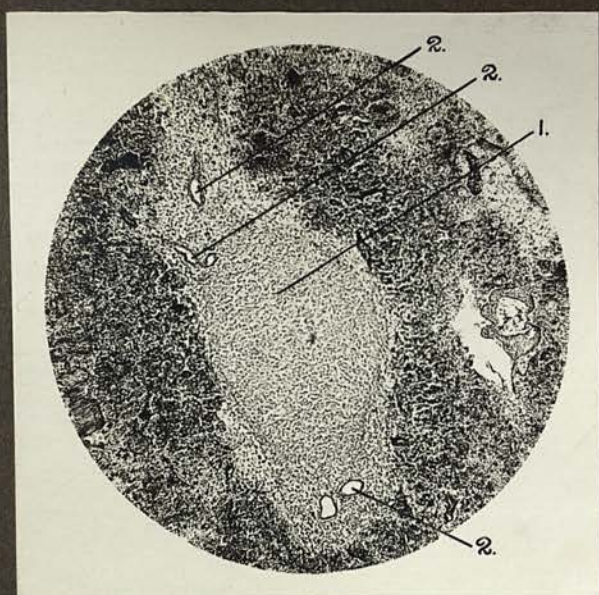
1. Malpighian body.
2. Artery.

ELLIPSOIDS.

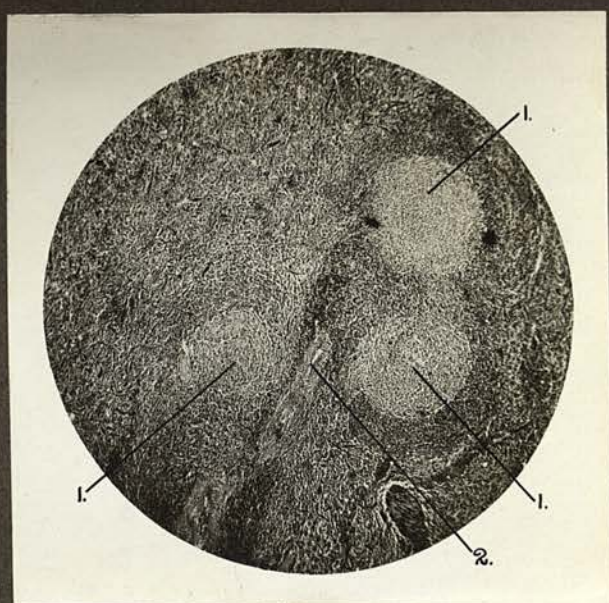
Fig. 45. Mare. 11 years old. Fixative Susa.
Stain phospho-tungstic acid
haematoxylin. M. x 100.

Fig. 46. Mare. 11 years old. Fixative Susa.
Stain Mallory. M. x 225.

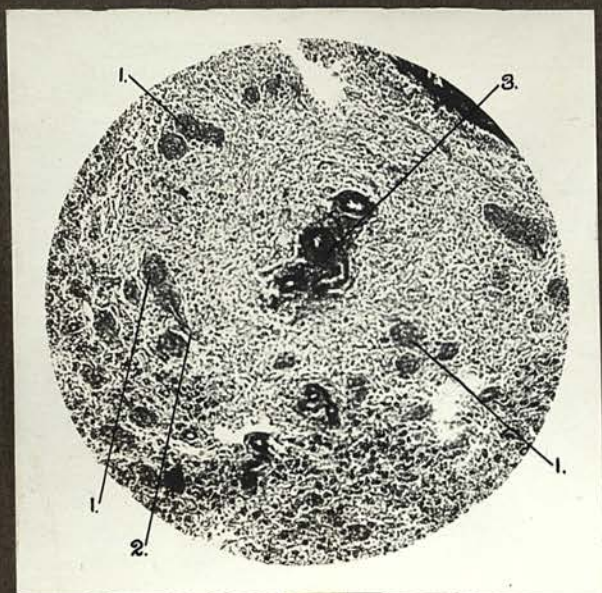
1. Ellipsoid.
2. Pre-capillary arteride.
3. Artery.



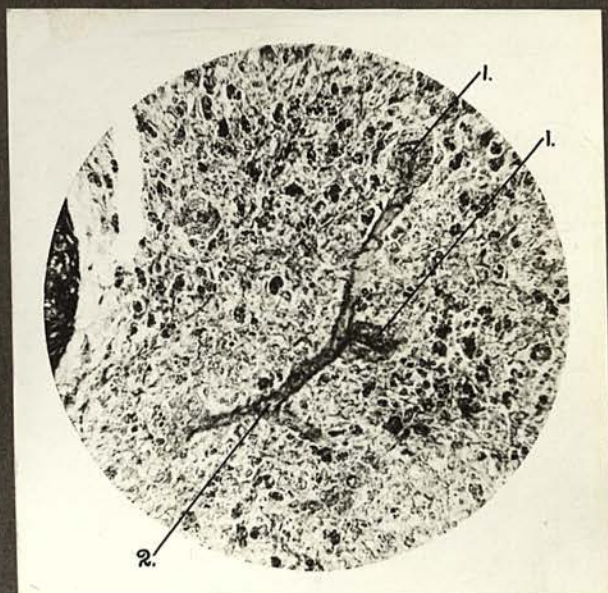
43.



44.



45.



46.

ELLIPSOIDS.

Fig. 47. Horse 18 years old. Fixative
Susa. Stain Mallory. M. x 485.
A. Uncoloured. B. Coloured.

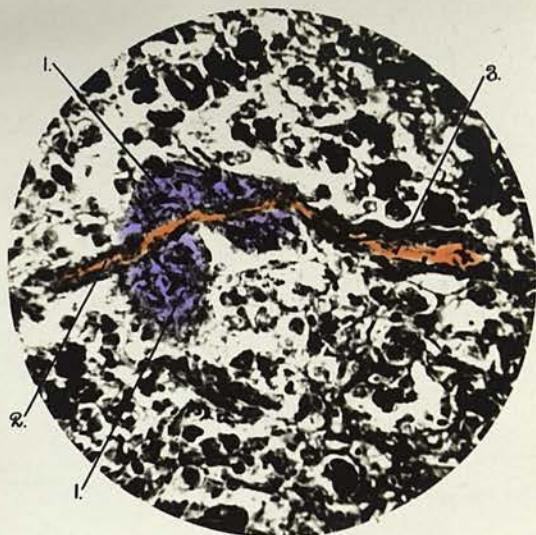
Fig. 48. Horse 17 years old. Fixative
Susa. Stain Mallory. M. x 260.

Fig. 49. Ox 2 years 3 months old. Fixative
Susa. Stain Mallory. M. x 240.

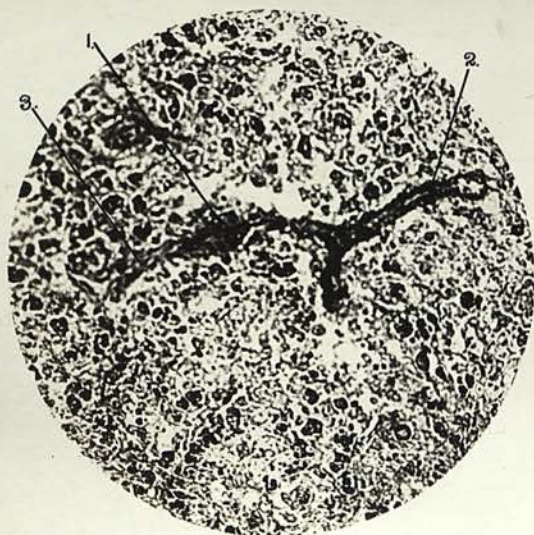
1. Ellipsoid.
2. Pre-capillary arteriole .
3. Terminal capillary.



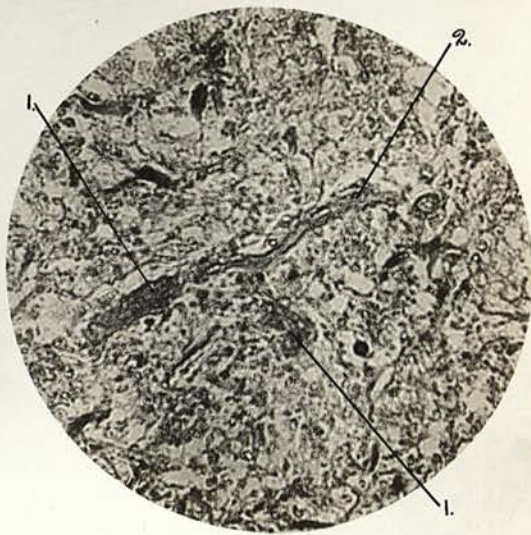
47. A.



47. B.



48.



49.

ELLIPSOIDS..

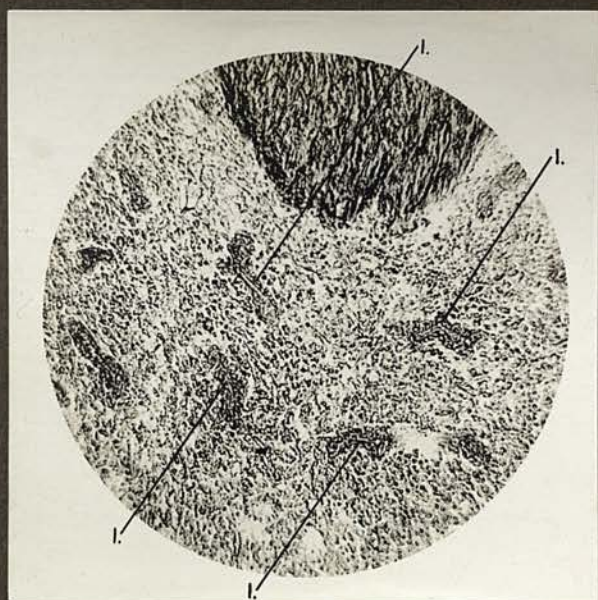
Fig. 50. Calf. Fixative Susa. Stain Mallory.
M.x 116.

Fig. 51. Pig. Young Fixative Susa. Stain
Mallory. M.x 140.

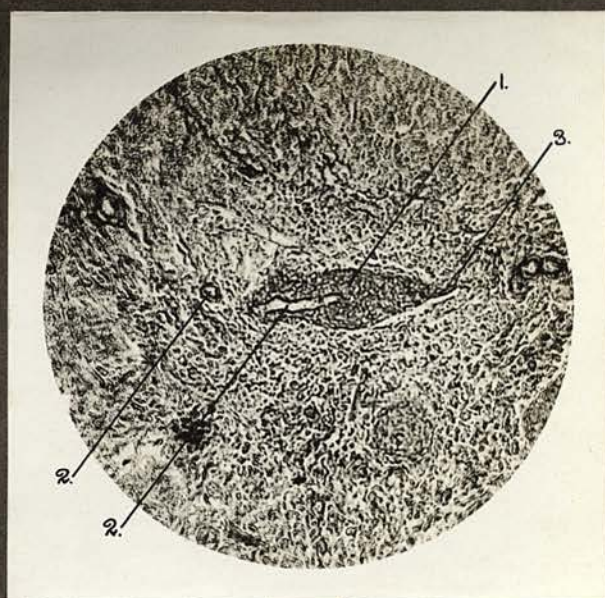
Fig. 52. Pig. Young Fixative Susa. Stain
Mallory. M.x 140.

A. Uncoloured. B. Coloured.

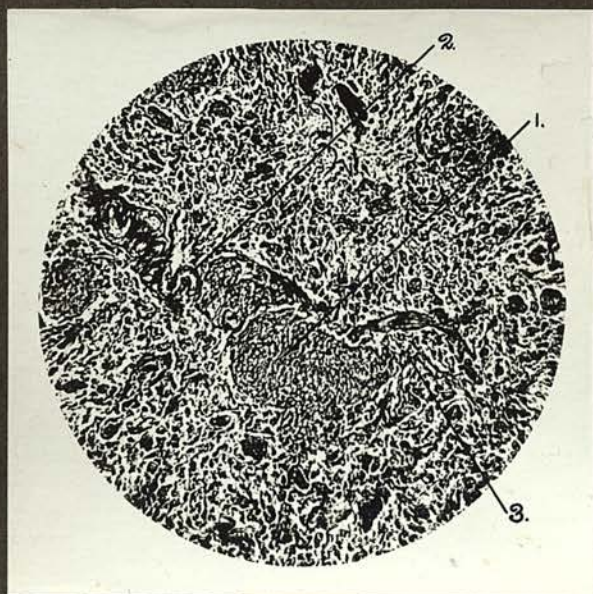
1. Ellipsoid.
2. Pre-capillary arteride.
3. Terminal capillary.



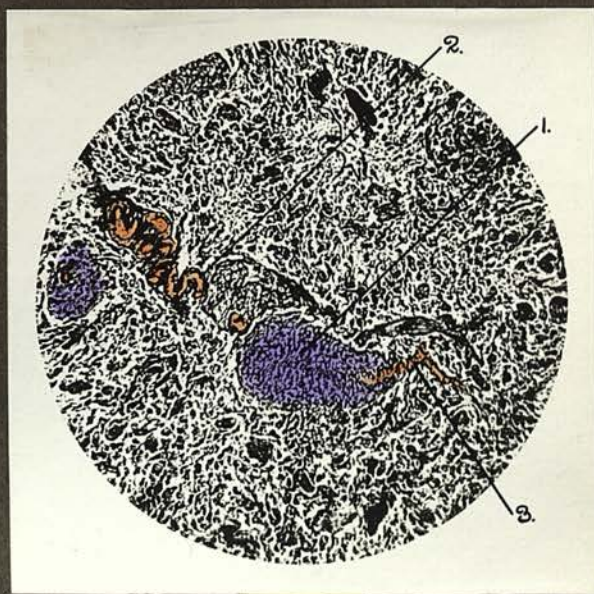
50.



51.



52. A.



52. B.

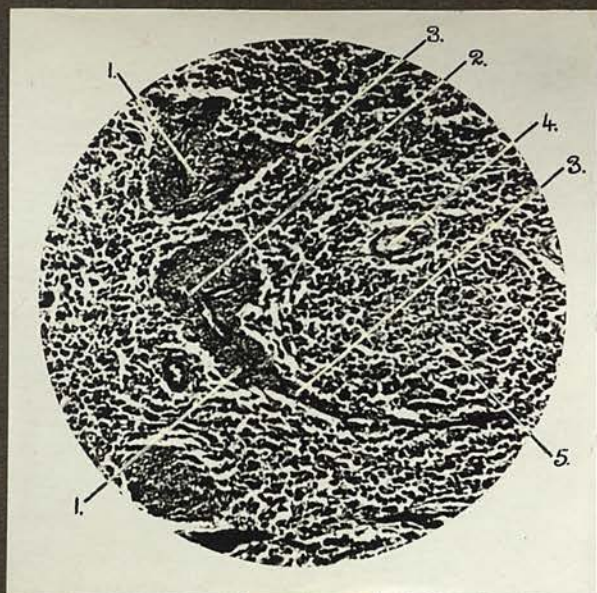
ELLIPSOIDS.

Fig. 53. Pig. Fixative Susa. Stain
Mallory. M. x 150.
A. Uncoloured. B. Coloured.

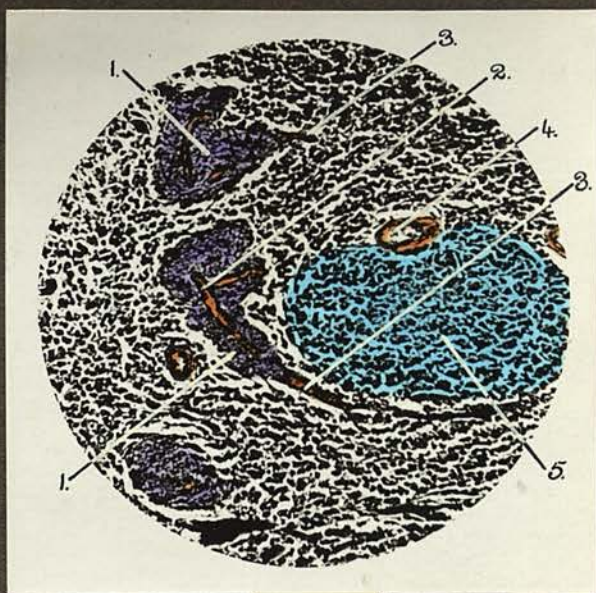
Fig. 54. Dog. 9 months old. Fixative Susa.
Stain Mallory. M. x 76..

Fig. 55. Puppy. 1 year old. Fixative
10% formalin. Stain Mallory. M. x 206.

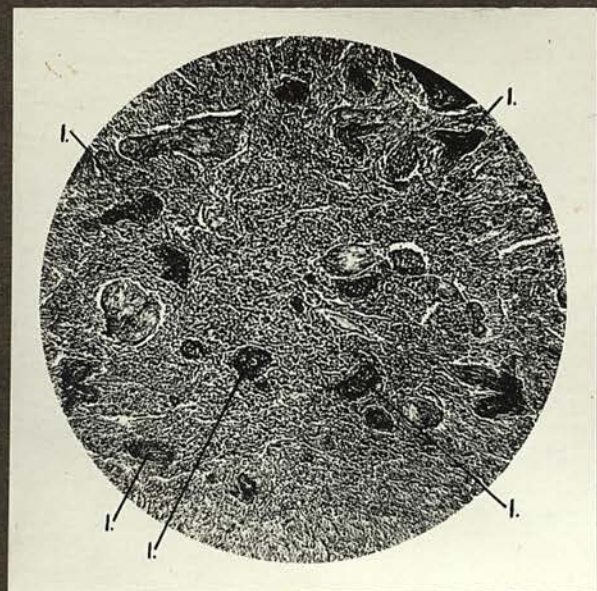
1. Ellipsoid.
2. Pre-capillary arteriole.
3. Terminal capillary.
4. Artery.
5. Malpighian Body.



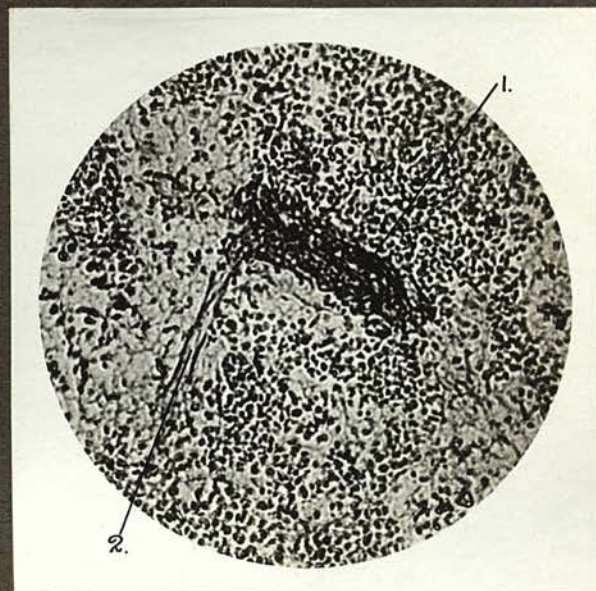
53. A.



53. B.



54.



55.

ELLIPSOIDS.

Fig. 56. Cat. Adult. Fixative Susa.
Stain Mallory. M. x 250.

1. Ellipsoid.
2. Pre-capillary arteriole.
3. Terminal capillary.

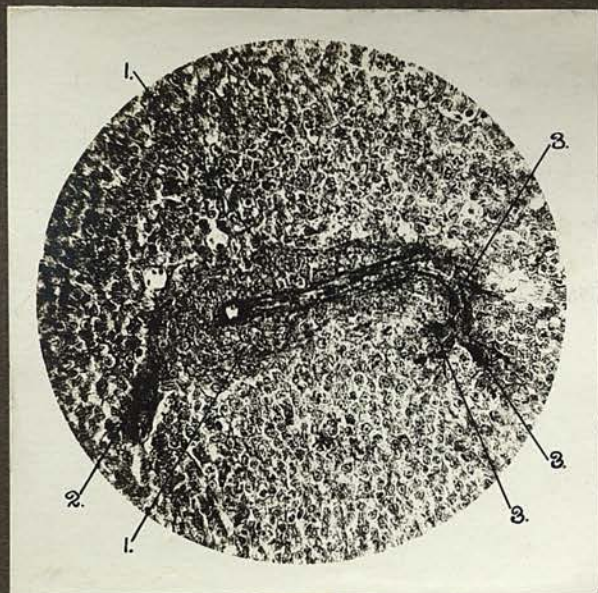
RED PULP.

Fig. 57. Horse. 7 years old. Fixative
Susa, Stain phospho-tungstic
acid haematoxylin. M. x 53.

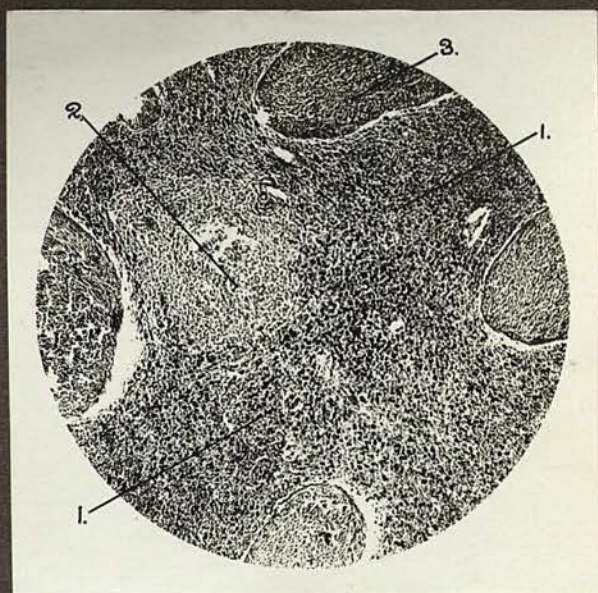
Fig. 58. Horse. 7 years old. Fixative
Susa. Stain phospho-tungstic
acid haematoxylin. M. x 207.

Fig. 59. Dog. Washed. Fixative 10% formalin.
Stain silver nitrate 1%. M. x 520.

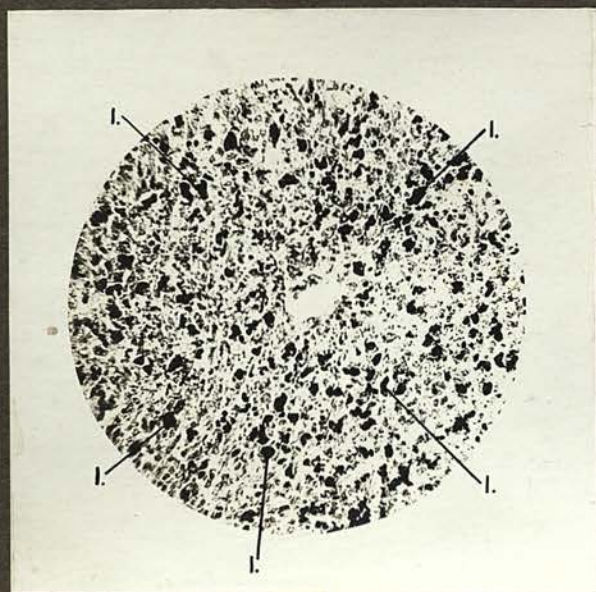
1. Pigment granules.
2. Lymphoid sheath.
3. Trabecula.
4. Reticulum of the red pulp.



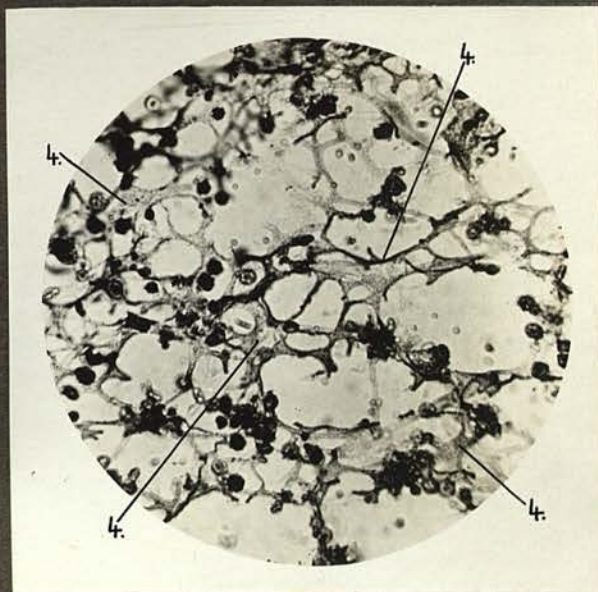
56.



57.



58.



59.

RED PULP.

Fig. 60. Sheep. 1 year old. Fixative
Flemming. Stain Mallory. M. x 91.

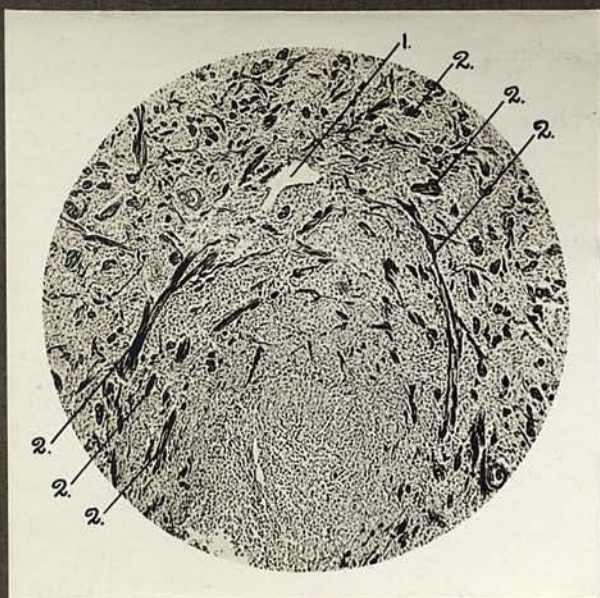
Fig. 61. Pig. 1 year old. Fixative
Flemming. Stain Mallory. M. x 84.

1. Veinule.
2. Muscle fibres.
3. Ellipsoid.

VEINS.

Fig. 62. Ox. 2 years 3 months old. Fixative
Susa. Stain Mallory. M. x 36.
A. Uncoloured. B. Coloured.

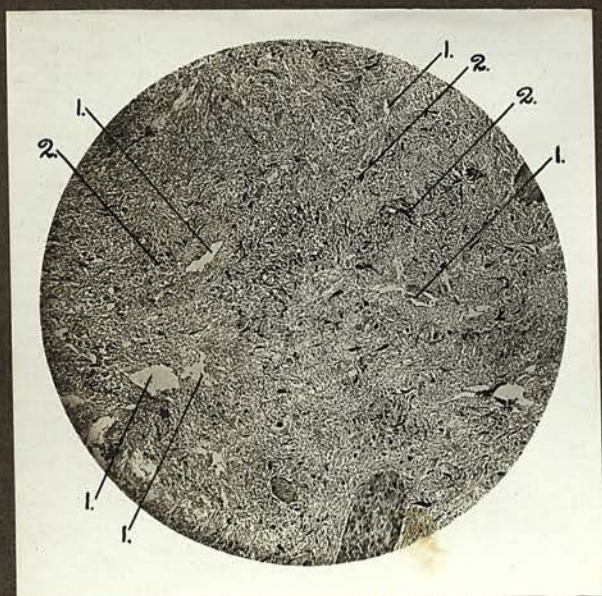
1. Veinule.
2. Muscle fibres.



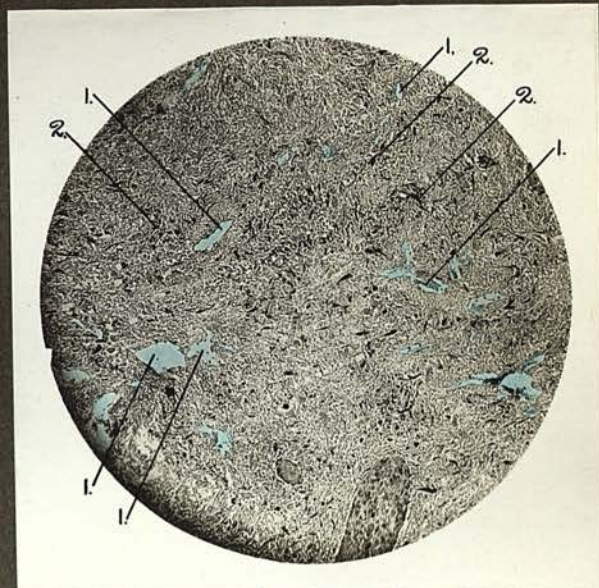
60.



61.



62. A.



62. B.

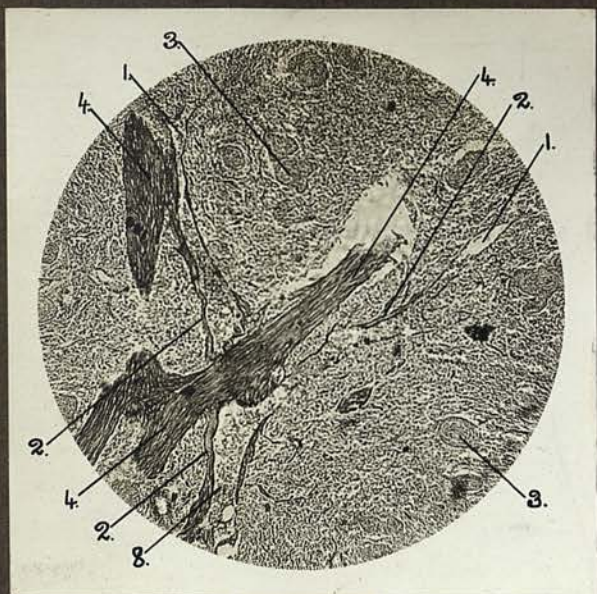
VEINS.

Fig. 63. Pig. 9 months old. Fixative
Susa. Stain Mallory. M. x 41.
A. Uncoloured. B. Coloured.

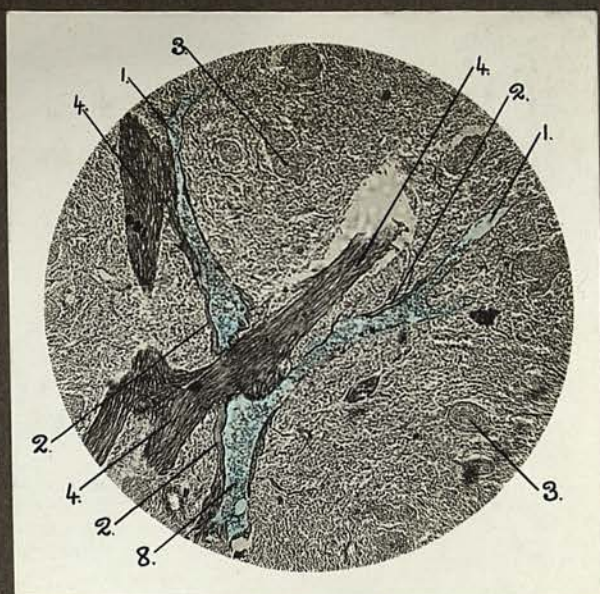
Fig. 64. Dog. 4 months old. Fixative
Susa. Stain Kulls Copper-carmin.
counter-stain, Orange G, Anilin
blue, Oxalic acid. M. x 18.

Fig. 65. Puppy. 7 weeks old. Fixative
Susa. Stain Mallory. M. x 20.

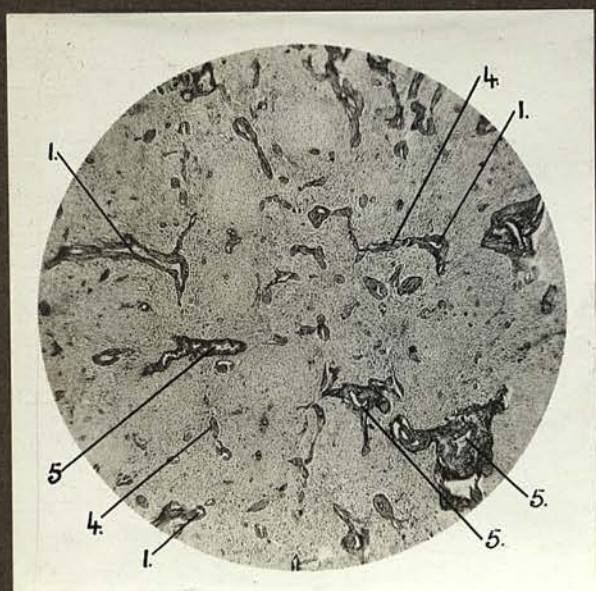
1. Veinule.
2. Muscle fibres.
3. Ellipsoid.
4. Trabecula.
5. Artery.
6. Capsule.
7. Hilar sheath.
8. Vein.



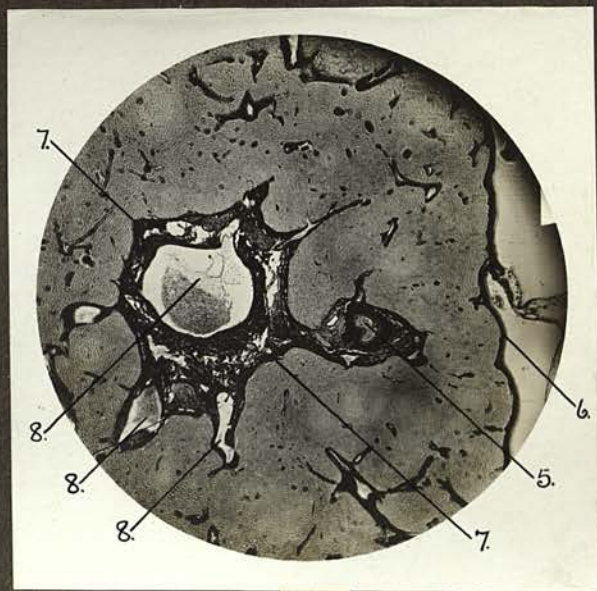
63. A.



63. B.



64.



65.